

ABSTRACT

The invention provides an improved semiconductor and an improved method for manufacturing the device. In a preferred embodiment, a gate electrode is formed on a semiconductor substrate through a gate dielectric layer. First and second impurity diffusion layers are formed in the semiconductor substrate on either side of the gate electrode, with the gate electrode interposed between the first and second impurity diffusion layers. Sidewall dielectric layers are formed on side surfaces of the gate electrode and configured so that the gate electrode has a width that increases gradually from a bottom of the gate electrode toward a top surface of the gate electrode. The first and second impurity diffusion layers are formed thick enough that the surfaces of the first and second impurity diffusion layers are higher than the interface between the semiconductor substrate and the gate dielectric layer. This allows a further miniaturized transistor with favorable transistor characteristics because the film thicknesses of the first and second impurity diffusion layers are maintained.